

Ceratina of the tallgrass prairie region and eastern North America

M. Arduser

revised August 29, 2020

Males:

1. Small (3-5 mm), blackish, non-metallic species; integument of head and scutum polished, shiny, with few punctures, contrasting with the densely and distinctly punctate scutellum; T6 apico-medially unmodified, without a small pubescent process; T7 broadly emarginate, this broad emargination bordered on either side by a short toothlike or spinose projection; southern and coastal TGP, SE US north into Arkansas**cockerelli**

Smith

Metallic blue or greenish, not black; usually larger (5-10 mm), and integument of head and scutum abundantly punctate, as is scutellum; T6 apico-medially with a small “tufted” process; T7 with a terminal shelf-like lamella, rim or medial lobe, but without teeth or spinose projections;

widespread in TGP

region.....**2**

2. Hind femur produced ventro-medially as a strong, sharp angle, width of femur at angle about half the length of

femur.....**3**

Hind femur not sharply angulate ventro-medially, but with a reduced, very obtuse angle on ventral margin closer to the base of the femur, width of femur at this angle much less than half length of

femur.....

.....**6**

3. T7 lamella truncate to sub-truncate and very broad, usually 3X as broad as long or longer, and much broader than the non-lamellate portions of T7 on either side of the lamella; body usually blueish; foretibia mostly dark with blueish tints, not rufescent, with or without ivory maculae; throughout TGP/Midwest.....**calcarata** Robertson

T7 lamella reduced, broadly rounded to lobate rather than sub-truncate, broadest at base, its width at base less than or equal to the non-lamellate portions of T7 on either side of the lamella

.....

.....**4**

4. Foretibia with a long ivory stripe on outer surface, stripe occasionally incomplete or broken into maculae, foretibia otherwise mostly brownish-rufescent; S6 apicomediaally with two large teeth between which are two tiny teeth; S8 medial process broadened and truncate apically; *strenua* species complex.....

.....**5**

Foretibia without stripe or maculae, integument dark, not brownish-rufescent; S6 apicomediaally with two equal-sized teeth; S8 medial process narrow throughout, apex not broadened; a primarily Texas species, recently collected on a prairie remnant in Fayette Co., Arkansas

.....**shinnersi**

5. T7 lamella about twice as broad as long or slightly broader, width across base about equal to width of non-lamellate portion of T7 (on either side of lamella); in dorsal view, gonocoxites projecting slightly beyond gonostyli; southern half of TGP region.....(**n. sp.?**) **nr. strenua**

T7 lamella width and length about equal, width across base less than width of non-lamellate portion of T7 (on either side of lamella); in dorsal view, gonocoxites and gonostyli equal, neither projecting beyond the other.....

.....**strenua**

Ceratina males of the tallgrass prairie region and eastern North America, continued

M. Arduser

6. Hind femur ventrally weakly angulate about 1/3 distance from its base, this weak angle usually with a very tiny, very weak tuft of setae at its apex, femur basad of this weak angle flattened, this flattened portion margined by a pair of weak carinae that branch off from the femur's ventral "edge" or carina; T7 lamella width at base no more than half the width of T7.....

.....**7**

Hind femur ventrally more rounded at about 1/3 the distance from its base, usually without a tiny tuft of setae at its apex, femur basad of this not flattened, but with a single weak "edge" or very weak carina reaching the entire length of the ventral margin of the femur; T7 lamella width greater, at least 2/3 or more the width of T7**mikmaqi** Rehan and Sheffield

7. Deep, bright blue integument; wings brownish throughout; S8 medial process not much broadened apically, 2-3 times longer than its apical width; southeastern US, rare in TGP/midwest.....

.....**floridana** Mitchell

Integument dull blue sometimes with dull greenish overtones; wings clearer; S8 medial process broadly truncate apically, length of medial process not much longer than its apical width; common in Midwest, uncommon west of Mississippi River..... **dupla** Say

Ceratina of the tallgrass prairie region and eastern North America
M. Arduser
revised March 4, 2020

Females:

1. Small (3-5 mm), blackish, non-metallic species; integument of head and scutum polished, shiny, with few punctures, contrasting with the densely and distinctly punctate scutellum; pronotum without dorso-ventral ridge; mostly along coast, inland to central Arkansas

.....
..**cockerelli** Smith

Blueish or greenish, not black; head and scutum with numerous close punctures, polished shiny areas more limited in extent; pronotum with dorso-ventral ridge present, its lower portion with sharp edge (i.e., finely carinate)
.....2

2. Foretibia usually with an ivory/yellow stripe on at least the basal half, but this stripe sometimes reduced and not resembling a stripe at all, but rather a "broken maculation"; foretibia brownish to rufescent in large part; integument overall usually more dull greenish than blueish; usually 5mm or less; S2-S5 with erect to suberect hairs on most of the punctate portions of the discs.....**strenua** Smith and (*n. sp.?*) *nr. strenua*
(see male key)

Foretibiae stripe often absent (small spot usually present at base of foretibiae), color of foretibiae usually dark with some blueish tints, not brown or rufescent; integument usually blueish, not dull greenish; usually larger than 5mm; S2-S5 hairs variable.....3

3. Wings brownish; integument bright, deep blue; foretibia with an ivory-yellow stripe or broken maculae; S2-S5 with erect to suberect hairs on most of punctate portion of discs; southeastern US, rare in TGP/Midwest.....**floridana** Mitchell

Wings clearer, integument blue but usually not as bright and deep blue as *floridana*; foretibia usually without an ivory-yellow stripe or broken maculae (but usually with a basal spot); S2-S5 hairs variable.....

.....4

4. T6 in profile notched above the apiculate apex, with an irregular pit or depression present just before the apex (in dorsal view); area between eye margin, antennal bases and ocelli shiny and polished with relatively few punctures; primarily Texas species, in our region known only from a prairie remnant in Fayette Co. Arkansas.....

shinnersi Daly

T6 in profile entire, smoothly transitioning to the apiculate apex, dorsally without an irregular pit or depression; area between eye margin, antennal bases and ocelli mostly punctate, the shiny, polished area limited.....5

[Note: **calcarata**, **dupla**, and **mikmaqi** key to couplet 5 below, and are often difficult to separate reliably in my opinion, but see Rehan and Sheffield (2011) and Discover Life for female keys and distinguishing features, as well as couplet 5 below.]

5. S3-S5 with most of punctate portions of discs with erect to suberect hairs; inner margins of parapsidal lines usually with one-several lines (or sometimes a small cluster) of punctures adjacent to them; clypeus often without ivory/yellow maculation

.....
calcarata Robertson and **dupla** Say

S3-S5 with most of punctate portions of discs with few erect to suberect hairs; inner margins of parapsidal lines usually with few if any punctures adjacent to lines; clypeus usually with ivory/yellow maculation.....

.....**mikmaqi** Rehan and Sheffield